Blister Rust
Effectiveness of Control.

TABULAR SUMMARY
Of Pine Infection Data Showing Effectiveness of Ribes Eradication at Kittery Point, Maine.

(Study made by G. B. Posey and W. J. Endersbee in August, 1921)

Ribes eradication was carried on at Kittery, Maine, in 1917 over an area of approximately six square miles, and an average of fifteen Ribes per acre were found. Ten acres of this area containing native pine and cultivated and wild currant bushes and severe infection were studied in the winter of 1917 and 1918.

The figures given below were obtained from this ten-acre tract and represent a recheck of approximately 10% of the area.

Total number pines examined 1917, rechecked 1921.....612

Total number pines infected with blister rust 1917, rechecked 1921.....363

Percentage of pines infected 1917..... 59%

Number pines dead from blister rust, 1921.....204

Per cent pines dead from blister rust, 1921.....33 1/3%

Number pines recovered from blister rust, 1921 (branch died before canker reached trunk)..... 30

Per cent pines recovered from blister rust, 1921.....4.8%

Number young pines first examined 1921 (grew since 1917).....146

Number young pines not infected.....146

Total number pines not infected since 1917.....354

(including 408 live pines examined 1917 and rechecked 1921 plus 146 young pines examined for first time 1921. No pines infected since 1917, or in other words, since Ribes were eradicated.

Blister Rust
Effectiveness of Control.

HAYDEN ESTATE, LAKE GEORGE, NEW YORK.

The rust was first discovered in the Lake George region in the spring of 1917 on this estate. Many infected pines were found over an area of about ten acres. Black currants in an adjacent garden and numerous wild gooseberry bushes were responsible for the infection. The original source of the disease is not known, but it was probably brought in on pine planting stock in 1908 and 1909, as most of the cankers on native pines started during the period 1911 to 1917.

In 1918 the currants and gooseberries were eradicated on this estate. In 1921 no cankers later than 1917 origin were found except in one corner of the tract where a few wild gooseberry bushes were overlooked by the crew. Adjacent to these bushes the pine show numerous cankers of 1918 and 1919 origin. Where Ribes were efficiently removed further pine infection has been successfully prevented.

In the Hayden woods damage is not severe because the Ribes were destroyed early enough to prevent serious injury. Across the road from the Hayden tract on another estate, just west of the garden in which the black currants grew, pines 40 to 50 feet high are dying from cankers which have reached the trunks below the crowns. Numerous branch infections on large pines on this estate are visible on most of the trees in this tract.

(Extract from Itinerary and Points of Interest, Second annual State Forestry Meeting, New York State, September 20-22, 1921)

Blister Rust
Effectiveness of Control.

Ribes Eradication Experiments Carried on at Lewis, N. Y. in 1919. Examination in 1921 Shows That Control Methods are Effective.

Bullis Pasture at Lewis: A very few infections occurred here as early as 1914 and 1915. In 1917 there were a larger number. In 1919 the Ribes were removed from a part of the north side of the pasture. With the exception of a few which were used for experimental purposes, the rest were allowed to remain. Where the Ribes were removed no more pine infections have been found. In other places there are many cases of pine infection, especially in 1919.

Cross Pasture at Lewis: A few infections occurred here in 1914 and 1915; and a few more occurred in 1917. Early in the season of 1919 the Ribes, which were fully as abundant as in the Bullis pasture, were eradicated by the regular eradication crew. No pine infections have occurred since the eradication.

(Extract from "Itinerary and Points of Interest, Second Annual State Forestry Meeting," New York State, September 20-22, 1921).

Blister Rust
Effectiveness of Control.

Eradication of Currants and Gooseberries in the Norfolk, Connecticut, Area Effectively Controlled the Blister Rust.

The effectiveness of Ribes eradication cannot be determined until sufficient time has elapsed to allow Ribes grown from seed, or from incompletely removed root crown, to become large enough so that they can be readily seen. Furthermore, on pines which have become infected since the Ribes were removed, the disease would require at least 2 years to reach a stage which could be unmistakably recognized. In order, therefore, to check up the results of previous Ribes eradication in Norfolk, some 4,000 acres which were worked in 1916, 1917, and 1919 were reworked in 1921 with the following results:

a. Some large Ribes missed in previous years were found, but these were so few in number per acre as to be of minor importance. Numerous small Ribes, originating either from seed or from improperly removed root crowns were found, but the small amount of leaf surface and the fact that these plants were usually growing under dense shade prevents their acting as important transmitters of the disease for several years. Judged by the comparatively small number of Ribes found in reworking, the first eradication appears to have been fairly effective but the necessity for rescouting these areas after a few years, and reworking them if necessary, is indicated.

b. The number of pines showing infection which had occurred since eradication was almost negligible. In contrast with this, on an area from which Ribes had not been removed prior to 1921, twenty-seven pine infections were found, 70% of which took place in 1918 and 1919.

(Extract from "Control of White Pine Blister Rust in Connecticut 1909-1921." Bulletin No. 237 of the Connecticut Agricultural Experiment Station, February, 1922, pp. 318, 319, by W. O. Filley and H. W. Hicock.)